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Anti-GBA/Glucosylceramidase Rabbit Monoclonal Antibody

Catalog # ABO13280

Product Information

Application	WB, IHC
Primary Accession	P04062
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human
Clonality	Monoclonal
Format	Liquid
Description	Anti-GBA/Glucosylceramidase Rabbit Monoclonal Antibody . Tested in WB, IHC applications. This antibody reacts with Human, Rat.

Additional Information

Gene ID	2629
Other Names	Lysosomal acid glucosylceramidase, Lysosomal acid GCase, 3.2.1.45, Acid beta-glucosidase, Alglucerase, Beta-glucocerebrosidase, Beta-GC, Beta-glucosylceramidase 1, Cholesterol glucosyltransferase, SGTase, 2.4.1.-, Cholesteryl-beta-glucosidase, 3.2.1.-, D-glucosyl-N-acylsphingosine glucohydrolase, Glucosylceramidase beta 1 {ECO:0000312|HGNC:HGNC:4177}, Imiglucerase, Lysosomal cholesterol glycosyltransferase, Lysosomal galactosylceramidase, 3.2.1.46, Lysosomal glycosylceramidase, GBA1 (HGNC:4177), GBA, GC, GLUC
Calculated MW	59716
Application Details	WB 1:500-1:2000 IHC 1:50-1:200
Subcellular Localization	Lysosome membrane ; Peripheral membrane protein ; Lumenal side. Interaction with saposin-C promotes membrane association. Targeting to lysosomes occurs through an alternative MPR-independent mechanism via SCARB2.
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: AACA-7
Immunogen	A synthesized peptide derived from human GBA
Purification	Affinity-chromatography

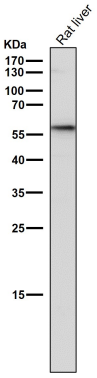
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

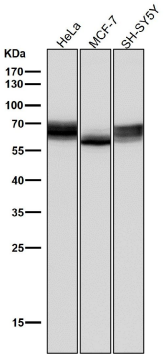
Protein Information

Name	GBA1 (HGNC:4177)
Synonyms	GBA, GC, GLUC
Function	Glucosylceramidase that catalyzes, within the lysosomal compartment, the hydrolysis of glucosylceramides/GlcCers (such as beta-D-glucosyl-(11')-N-acylsphing-4-enine) into free ceramides (such as N-acylsphing-4-enine) and glucose (PubMed:15916907, PubMed:24211208, PubMed:32144204, PubMed:39395789, PubMed:9201993). Plays a central role in the degradation of complex lipids and the turnover of cellular membranes (PubMed:27378698). Through the production of ceramides, participates in the PKC-activated salvage pathway of ceramide formation (PubMed:19279011). Catalyzes the glucosylation of cholesterol, through a transglucosylation reaction where glucose is transferred from GlcCer to cholesterol (PubMed:24211208, PubMed:26724485, PubMed:32144204). GlcCer containing mono-unsaturated fatty acids (such as beta-D-glucosyl-N-(9Z-octadecenoyl)-sphing-4-enine) are preferred as glucose donors for cholesterol glucosylation when compared with GlcCer containing same chain length of saturated fatty acids (such as beta-D-glucosyl-N-octadecanoyl-sphing-4-enine) (PubMed:24211208). Under specific conditions, may alternatively catalyze the reverse reaction, transferring glucose from cholesteryl 3-beta-D-glucoside to ceramide (Probable) (PubMed:26724485). Can also hydrolyze cholesteryl 3-beta-D- glucoside producing glucose and cholesterol (PubMed:24211208, PubMed:26724485, PubMed:39395789). Catalyzes the hydrolysis of galactosylceramides/GalCers (such as beta-D-galactosyl-(11')-N- acylsphing-4-enine), as well as the transfer of galactose between GalCers and cholesterol in vitro, but with lower activity than with GlcCers (PubMed:32144204). Contrary to GlcCer and GalCer, xylosylceramide/XylCer (such as beta-D-xyosyl-(11')-N-acylsphing-4- enine) is not a good substrate for hydrolysis, however it is a good xylose donor for transxylosylation activity to form cholesteryl 3-beta- D-xyloside (PubMed:33361282). Can also metabolize plant glycosyl phytosterols such as glucosylstigmasterol (PubMed:39395789).
Cellular Location	Lysosome membrane; Peripheral membrane protein; Lumenal side. Note=Interaction with saposin-C promotes membrane association (PubMed:10781797). Targeting to lysosomes occurs through an alternative MPR-independent mechanism via SCARB2 (PubMed:18022370).

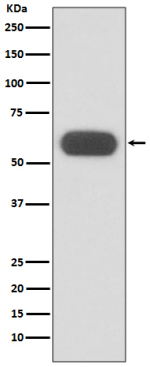
Images

All lanes use the Antibody at 1:5K dilution for 1 hour at room temperature.





All lanes use the Antibody at 1:5K dilution for 1 hour at room temperature.



Western blot analysis of GBA expression in U87-MG cell lysate.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.